

IN THE CLAIMS:

The claims are amended as follows:

1. (Amended) A multiple wavelength surface-emitting laser device comprising:

a substrate; and

a plurality of surface-emitting lasers that are formed on the substrate by a continuous manufacturing process,

wherein each of said plurality of surface-emitting lasers comprises:

a bottom reflection layer on the substrate, that is doped with impurities of a first type and that is composed of alternating semiconductor material layers having different refractive indexes;

an active layer on the bottom reflection layer;

an intermediate layer that is doped with impurities of a second type on the active layer;

a top electrode on the intermediate layer, said top electrode having a window through which light is emitted; and

a dielectric reflection layer where dielectric materials with different refractive indexes are alternately layered on the intermediate layer and the top electrode to be dielectric layers of a thickness suitable for a desired resonance wavelength, whereby the desired resonance wavelength is controlled by adjusting the thickness of the dielectric layers of the dielectric reflection layer.

6. (Amended) A method of manufacturing a multiple wavelength surface-emitting laser device comprising the steps of sequentially forming, on a prepared substrate, a bottom reflection layer, that is doped with impurities of a first type and composed of alternating semiconductor material layers having different refractive indexes, an active layer and an intermediate layer that is doped with impurities of a second type;

forming an arrangement of a plurality of surface-emitting lasers by removing the intermediate layer, the active layer and a part of the bottom reflection layer by etching;

forming on the intermediate layer of each surface-emitting laser a top electrode having a window through which light is emitted; and

forming on at least one of the intermediate layer and the top electrode of each surface-emitting laser, a dielectric reflection layer where different dielectric materials are alternately layered to be dielectric layers of a thickness suitable for a desired resonance wavelength, whereby the desired resonance wavelength is controlled by adjusting the thickness of the dielectric layers of the dielectric reflection layer.

Please add the following new claim.

13. (New) A multiple wavelength surface-emitting laser device comprising:

a substrate; and

a plurality of surface-emitting lasers formed on the substrate by a continuous manufacturing process,

wherein each of said plurality of surface-emitting lasers comprises:

a bottom reflection layer on the substrate, that is doped with impurities of a first type and that is composed of alternating semiconductor material layers having different refractive indexes;

an active layer on the bottom reflection layer;

an intermediate layer that is doped with impurities of a second type on the active layer;

a top electrode on the intermediate layer, said top electrode having a window through which light is emitted; and

a dielectric reflection layer comprising dielectric layers composed of dielectric materials with different refractive indexes alternately layered on the intermediate layer and the top electrode so that a thickness of the dielectric layers is optimized for a desired resonance wavelength, whereby the desired resonance wavelength is controlled by adjusting the thickness of the dielectric layers of the dielectric reflection layer.
